

REMARKS/ARGUMENTS

Upon entry of the amendment, claims 1, 3-6, 8, 11, 16, 18, 20, 22-26, and 28 have been amended, and claims 2 and 21 have been cancelled. Thus, claims 1, 3-20, and 22-28 are currently pending for consideration by the Examiner. Applicants respectfully request reconsideration of the outstanding rejection and allowance of all of the claims pending in the application.

In the Final Official Action, the Examiner objected to claims 16, 18, and 20 as being dependent upon a rejected base claim, and indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, Applicants have amended claims 16, 18, and 20 to be in independent form including all of the limitations of the base claim and any intervening claims. Thus, Applicants submit that claims 16, 18, and 20 are now allowable.

Claims 1 and 11-13 were rejected under 35 U.S.C. § 103 (a) over SUGIMOTO et al. (WIPO Int. App. Pub. WO 02/084750 A1).

Claims 2-10 and 26 were rejected under 35 U.S.C. § 103 (a) over SUGIMOTO et al. in view of HARRAH et al. (U.S. Patent No. 6,498,355).

Claims 14, 15, 17, and 19 were rejected under 35 U.S.C. § 103 (a) over SUGIMOTO et al. in view of SCHNEIDER (U.S. Patent No. 5,172,301).

Claims 21-24 and 27 were rejected under 35 U.S.C. § 103 (a) over SUGIMOTO et al. in view of HAITZ (U.S. Patent No. 5,323,084).

Claims 25 and 28 were rejected under 35 U.S.C. § 103 (a) over SUGIMOTO et al. in view of HAITZ, and further in view of TSUJI et al. (JP 4048740).

It is noted that the Final Official Action appears to contain an administrative error in that dependent claim 27 was rejected under 35 U.S.C. § 103 (a) over SUGIMOTO in view of HAITZ. However, claim 27 depends upon claim 26 that is rejected under 35 U.S.C. § 103 (a) over SUGIMOTO in view of HARRAH. Accordingly, it would appear that dependent claim 27 should have been listed as being rejected over SUGIMOTO in view of HARRAH, and further in view of HAITZ.

Independent claim 1 has been amended to include amended limitations of formerly dependent claim 2. The Final Official Action acknowledged that SUGIMOTO fails to disclose the features included in the formerly dependent claim 2, now amended and included into amended claim 1. However, the Final Official Action asserted that HARRAH's Figure 2 and column 2, line 49, through column 5, line 25, teach a first plate 8, 10, 6 for heat transfer that includes a metallic plate 6, an insulator layer 10, and an electrical connection pattern layer 8 formed on the insulator layer 10. The Final Official Action also asserted that the same cited portions of HARRAH teach that the first plate of the mount base 30 is bonded thermally to a portion of the metallic plate of the first plate exposed at a side opposed to the submount by removing the insulator layer and the pattern layer, and that the electrically conducting lines 34, 36 of the submount are connected electrically to the electrically to the electrical connection pattern layer 8 of the first plate by vias 38, 40.

Upon review, although HARRAH appears to teach the provision of a metallic plate 6, a dielectric layer 10, and the thermal bonding of submount 30 to a portion of the metallic plate 6, Applicants submit that HARRAH does not teach the amended provisions that state that the first plate of the mount base of the submount is thermally bonded to a portion of the metallic plate of the first plate exposed at a side opposed to the submount via a removed insulator layer and

pattern layer. Applicants also submit that HARRAH fails to teach that the submount electrical conducting lines are connected electrically to the electrical connection pattern layer of the first plate. Accordingly, Applicants submit that amended claim 1 is now patentable over the combination of SUGIMOTO and HARRAH. Corresponding dependent claims 3-10 and 26-27 are also submitted to be patentable for at least the reasons stated above regarding amended independent claim 1, and further, for the additional features cited therein.

Claim 11 has been amended to be in independent form. The Final Official Action asserts that SUGIMOTO's Figure 4a discloses the provision of at least one groove on the first plane of the mount base 4, however, the assertion does not identify any groove thereon. Upon review, Applicants submit that SUGIMOTO's Figure 4a does not appear to disclose the provision of a groove on the first plane of the mount base. Accordingly, Applicants submit that independent claim 11 is patentable over SUGIMOTO. Corresponding dependent claims 12-15, 17, and 19 are also submitted to be patentable for at least the reasons stated above regarding amended independent claim 11, and further, for the additional features cited therein.

Claim 22 has been amended to be in independent form. The Final Official Action asserts that HAITZ's Figure 3B and column 5, lines 17-31, teach that a second plate 12 for heat transfer comprises another metallic plate, an insulator layer 18 formed thereon, and an electrical connection pattern layer formed on the insulator layer, and that the electrical connection pattern layer is connected electrically to the electrically conducting line of the submount. Upon review, the asserted portions of HAITZ appear to show that electrical connections are made between the integrated circuit chips and LEDs by combinations of wire bonds and metal traces or lines deposited on the glass substrate. Thus, Applicants submit that HAITZ fails to teach an electrical connection pattern layer connected to electrically conducting lines of the submount.

Accordingly, Applicants submit that independent claim 22 is patentable over SUGIMOTO in view of HAITZ. Corresponding dependent claims 23-25 and 28 are also submitted to be patentable for at least the reasons stated above regarding amended independent claim 22, and further, for the additional features cited therein.

SUMMARY

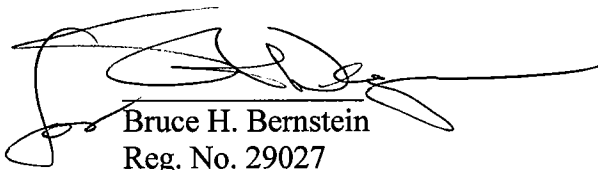
From the amendments, arguments, and remarks provided above, Applicants submit that all of the pending claims in the present application are patentable over the references cited by the Examiner, either alone or in combination. Accordingly, reconsideration of the outstanding Final Official Action is respectfully requested and an indication of the allowance of claims 1, 3-20, and 22-28 is now believed to be appropriate.

Applicants note that this amendment is being made to advance prosecution of the application to allowance, and should not be considered as surrendering equivalents of the territory between the claims prior to the present amendment and the amended claims. Further, no acquiescence as to the propriety of the Examiner's rejections is made by the present amendment. All other amendments to the claims which have been made by this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should an extension of time be necessary to maintain the pendency of this application, including any extensions of time required to place the application in condition for allowance by an Examiner's Amendment, the Commissioner is hereby authorized to charge any additional fee to Deposit Account No. 19-0089.

Should there be any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully Submitted,
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